WHAT IS CLAIMED IS:

1. An ink reservoir of an ink jet recording apparatus, the ink jet recording apparatus comprising: an ink jet head; the ink reservoir attached to the head and containing an ink absorbing member which stores an ink supplied to the head; pressure reduction means, connected to the ink reservoir at a specific timing, for reducing an internal pressure of the reservoir; and an ink tank containing the ink replenished into the ink reservoir by a pressure reduced state caused by the pressure reduction means connected to the ink reservoir at the specific timing, the ink jet recording apparatus discharging the ink from the ink jet head by a specified amount and performing an ink filling operation after the ink is replenished into the ink reservoir using the pressure reduction means and the ink tank, the ink reservoir comprising:

an absorbing member arrangement area in which the ink absorbing member is arranged; and

an absorbing member non-arrangement area that is a space in which the ink absorbing member is not arranged and that temporarily stores the ink, wherein

if an ink discharge amount that is the specified amount by which the ink is discharged is V1, a volume of the absorbing member non-arrangement area

is V2, and a volume of the area in the ink reservoir which stores the ink right after the ink is supplied is V3, then the volumes V1, V2, and V3 fall within ranges of $V3 \leq 20V1$ and $0.7V1 \leq V2 \leq V1$.

2. The ink reservoir according to claim 1, wherein

the ink reservoir is spatially divided into a coupling section of the pressure reduction means and the absorbing member arrangement area by a gas-liquid separation member, the gas-liquid separation member restricting filling of the ink into the ink reservoir.

3. An ink jet head structure comprising an ink reservoir of an ink jet recording apparatus, the ink jet recording apparatus comprising: an ink jet head; the ink reservoir attached to the head and containing an ink absorbing member which stores an ink supplied to the head; pressure reduction means, connected to the ink reservoir at a specific timing, for reducing an internal pressure of the reservoir; and an ink tank containing the ink replenished into the ink reservoir by a pressure reduced state caused by the pressure reduction means connected to the ink reservoir at the specific timing, the ink jet recording apparatus discharging the ink from the ink

jet head by a specified amount and performing an ink filling operation after the ink is replenished into the ink reservoir using the pressure reduction means and the ink tank, the ink jet head structure comprising:

an absorbing member arrangement area in which the ink absorbing member of the ink reservoir is arranged; and

an absorbing member non-arrangement area that is a space in which the ink absorbing member is not arranged and that temporarily stores the ink, wherein

if an ink discharge amount that is the specified amount by which the ink is discharged is V1, a volume of the absorbing member non-arrangement area is V2, and a volume of the area in the ink reservoir which stores the ink right after the ink is supplied is V3, then the volumes V1, V2, and V3 fall within ranges of $V3 \leq 20V1$ and $0.7V1 \leq V2 \leq V1$.

4. The ink jet head structure according to claim 3,

the ink reservoir is spatially divided into a coupling section of the pressure reduction means and the absorbing member arrangement area by a gas-liquid separation member, the gas-liquid separation member restricting filling of the ink into the ink reservoir.

5. An ink jet recording apparatus comprising:

a main tank storing an ink;

a negative pressure generator generating a negative pressure; and

an ink jet recording head having an ink discharge port for discharging the ink, the ink jet recording head comprising a sub-tank storing the ink supplied from the main tank, wherein

the sub-tank contains therein an ink absorbing member impregnated with and holding the ink, and comprises: a gas-liquid separation member arranged in the sub-tank, and separating the ink stored in the sub-tank from external air; an air hole for discharging air in the sub-tank through the gas-liquid separation member; an ink filled section replenished with the ink,

the negative pressure generator is connected to the air hole and discharges the air in the sub-tank, whereby the ink is supplied from the main tank into the sub-tank through the ink filled section and the ink is discharged from the ink discharge port by a specified amount right after the ink is supplied,

an area in the sub-tank which stores the ink right after the ink is supplied includes an absorbing member arrangement area in which the ink absorbing member is arranged and an absorbing member non-

arrangement area that is a space in which the ink absorbing member is not arranged and which temporarily stores the ink, and

wherein if an ink discharge amount that is the specified amount by which the ink is discharged is V1, a volume of the absorbing member non-arrangement area is V2, and a volume of the area in the ink reservoir which stores the ink right after the ink is supplied is V3, then the volumes V1, V2, and V3 fall within ranges of $V3 \leq 20V1$ and $0.7V1 \leq V2 \leq V1$.